Digital Modulator with DVB-T Output
1080p Full HD Encoder

HD400MOD

USER MANUAL V1.0

Congratulations on your purchase of the HD400MOD !

This 'state of the art' product, is a HD encoder. The video and audio input or taken from HDMI.

After compressing the video into H264 and audio in AAC or MPEG1-L2, the output is available as DVB-T signal.

Stand-alone configuration is made easy through 4 tact switches and ergonomic menu's. To make the configuration of the HD400MOD ultra simple, a special software TMHDIface is available that you can download on our website anttron.com

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1 - Safety considerations

1.1 CONNECTING TO THE MAINS SUPPLY

This product has to be connected to the mains supply. If there is the slightest doubt concerning the type of connection available on the installation, please contact your supplier of electricity. Before carrying out maintenance operation or modification of the installation, the modulator has to be disconnected. Remark : only use the supplied power adaptor.

1.2 OVERVOLTAGE

An overvoltage on the mains supply,can cause shortcircuits or fire. Never overload the power lines.

1.3 LIQUIDS

This module should be protected from splashes. Please assure yourself that no containers containing liquids are placed on this module. Also be aware of other persons splashing liquids on the module.

1.4 CLEANING

Disconnect the module before cleaning. Use only a humid cloth without solvant.

1.5 VENTILATION

In order to assure an adequate air circulation and to prevent overheating, the ventilation holes should not be obstructed. The module may not be installed in a hermetically sealed environment. Other electronic products or heat producing items may not be placed upon or near the module.

1.6 ACCESSORIES

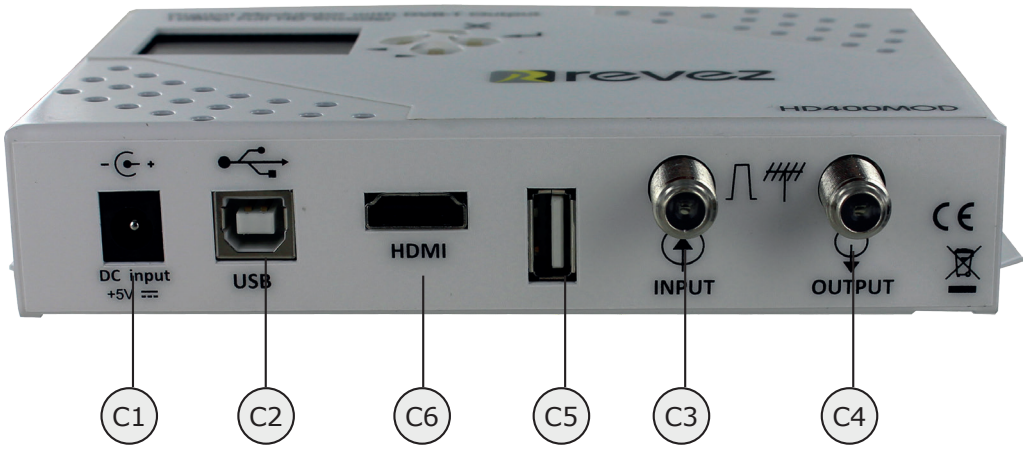
The use of accessories not manufactured by the manufacturer can cause damage to the module.

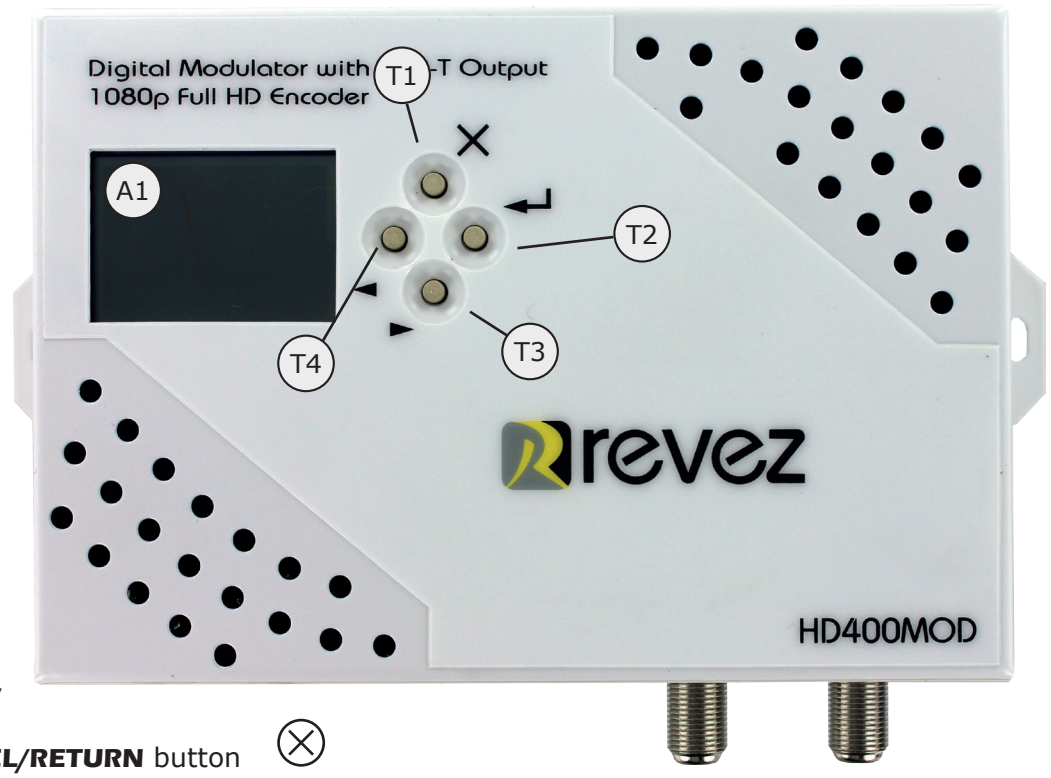
1.7 INSTALLATION OF THE MODULE

The module must be installed in a place well protected from direct sunlight. All measures have to be taken to avoid installation in humid or sunny place.Do not install near heating elements or other devices producing heat. Assure yourself that the module is placed at least 10 cm from other equipment with is susceptible to electromagnetic radiation. Do not install the module on instable items. A fall can cause physical or material damage.

2 - Description of the different elements

C1 Power supply input (5V/2A)
C2 USB input (for programming the HD400MOD by PC)
C3 RF input
C4 RF output
C5 for future use
C6 HDMI input





A1 Display

T1 ***CANCEL/RETURN*** button ⊗

T2 ***ENTER*** button ↵

T3 ▶ (move forward/down) button

T4 ◀ (move backward/up) button

3 - Installation and menu structure

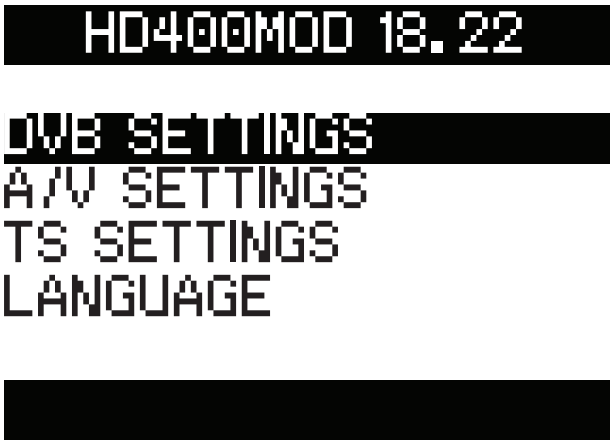
3.1 - Installation

Connect the audio and video source using a HDMI cable. Connect the RF input cable (if present) and the RF output cable. If the RF input is not used, please connect a 75 ohm terminating resistor to it. Once the modulator installed and the cables connected, please proceed connecting the power supply to the modulator.

3.2 - Powering up

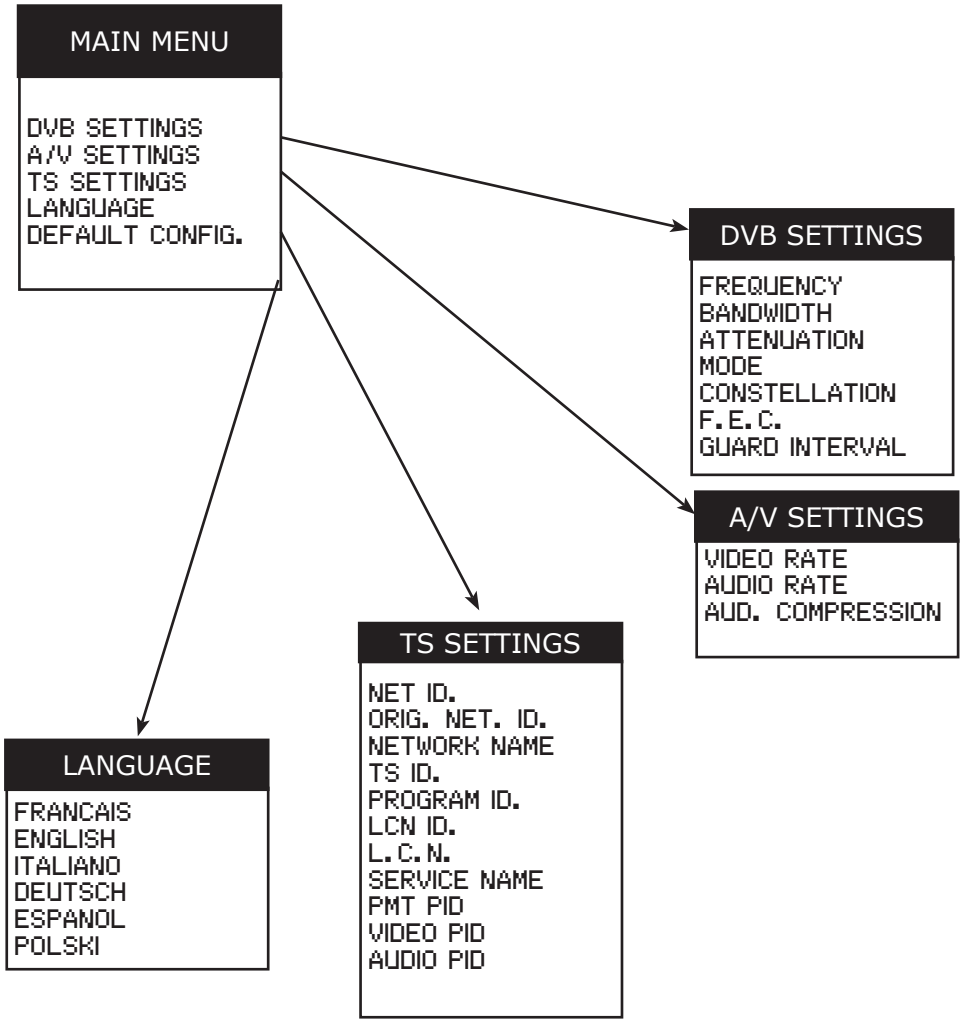
Plug in the connector of the power supply. The display will show the REVEZ logo while booting. Once the modulator has booted correctly the main menu will appear.

In the first line the model number is displayed (HD400MOD) followed by the installed firmware version.



3.3 - Menu structure

The HD400MOD has different menus allowing easy access to the differents parameters and to change them when necessary. Below you will find the structure of the different menus.



In order to go from one menu to the other use the MOVE ***UP/DOWN*** keys to select the menu option. Press the ***ENTER*** button to select this option. Press the ***CANCEL*** button to go back to the previous menu.

To set parameters, whether you have the option to select a specific value. In the other case some number or text string should be entered. In that case, use the buttons ▶ and ◀ to move to the desired character and press the ENTER button to confirm. Please note the following ***SPECIAL CHARACTERS*** :

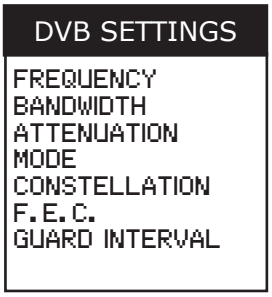
↵ confirm the modified value / ⨯ erase all / ← backspace

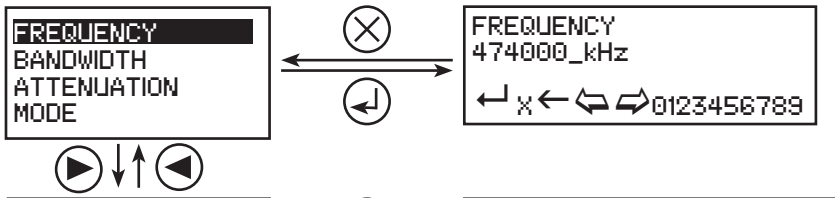
⇦⇨ move cursor back or forward

4 - Setting up the HD400MOD

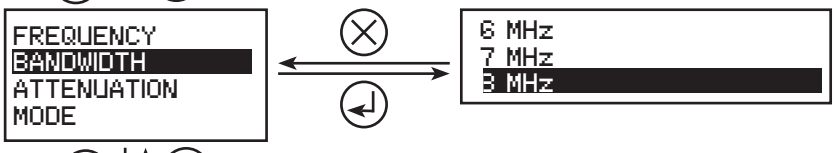
4.1 - The DVB settings menu

In this menu you can set the output frequency, bandwidth, output level and specific parameters for DVB-T.

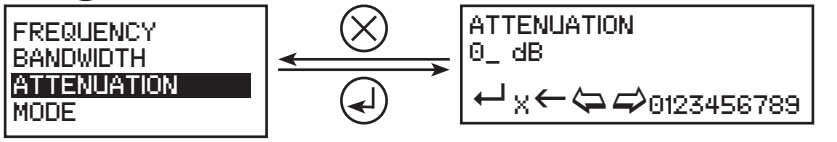




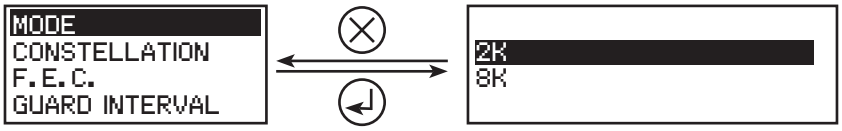
Set the output frequency



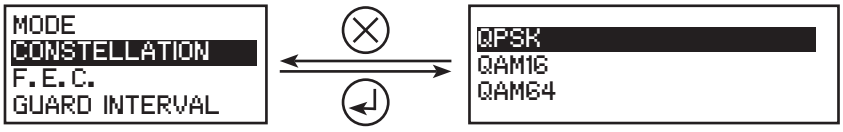
Select the bandwidth



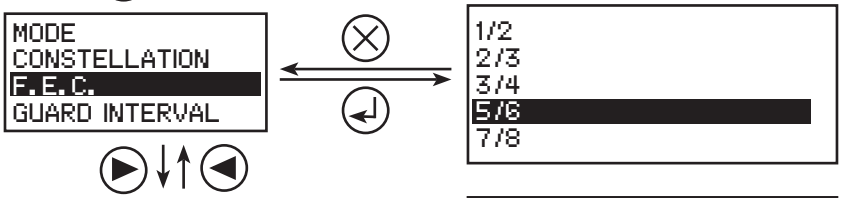
Set the output level



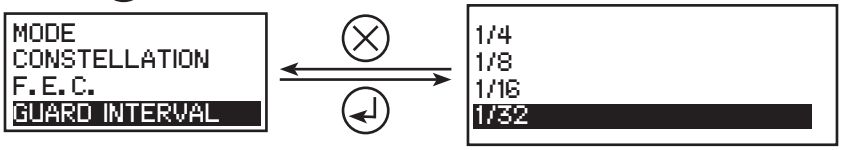
Select the mode



Select the constellation



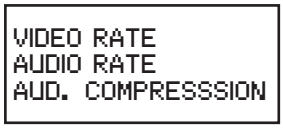
Select the F.E.C.

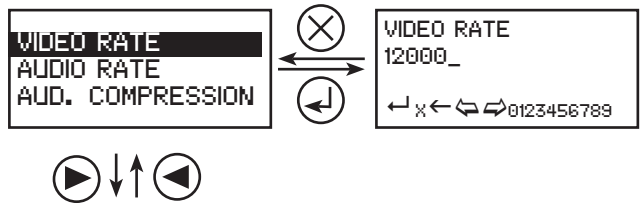


Select the Guard Interval

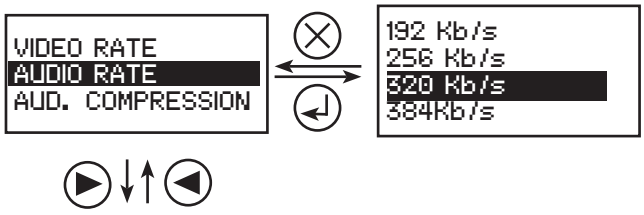
4.2 - The AV settings menu

In the A/V settings menu, you can set specific parameters for video and audio.

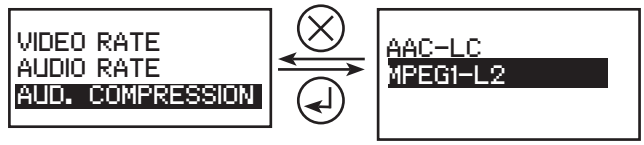




Set the video bit rate



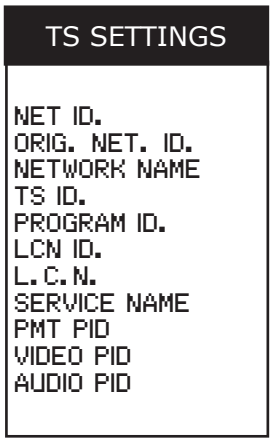
Select the audio bitrate

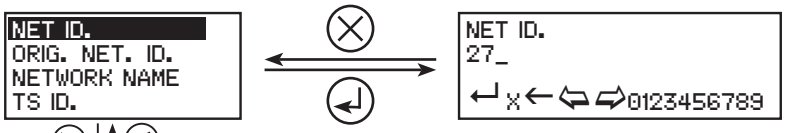


Select the compression type

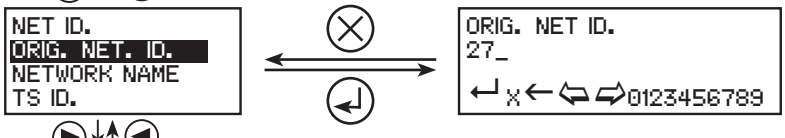
4.3 - The TS settings menu

This menu allows you to adjust specific parameters of the transport stream.

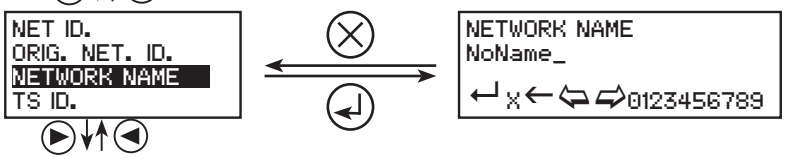




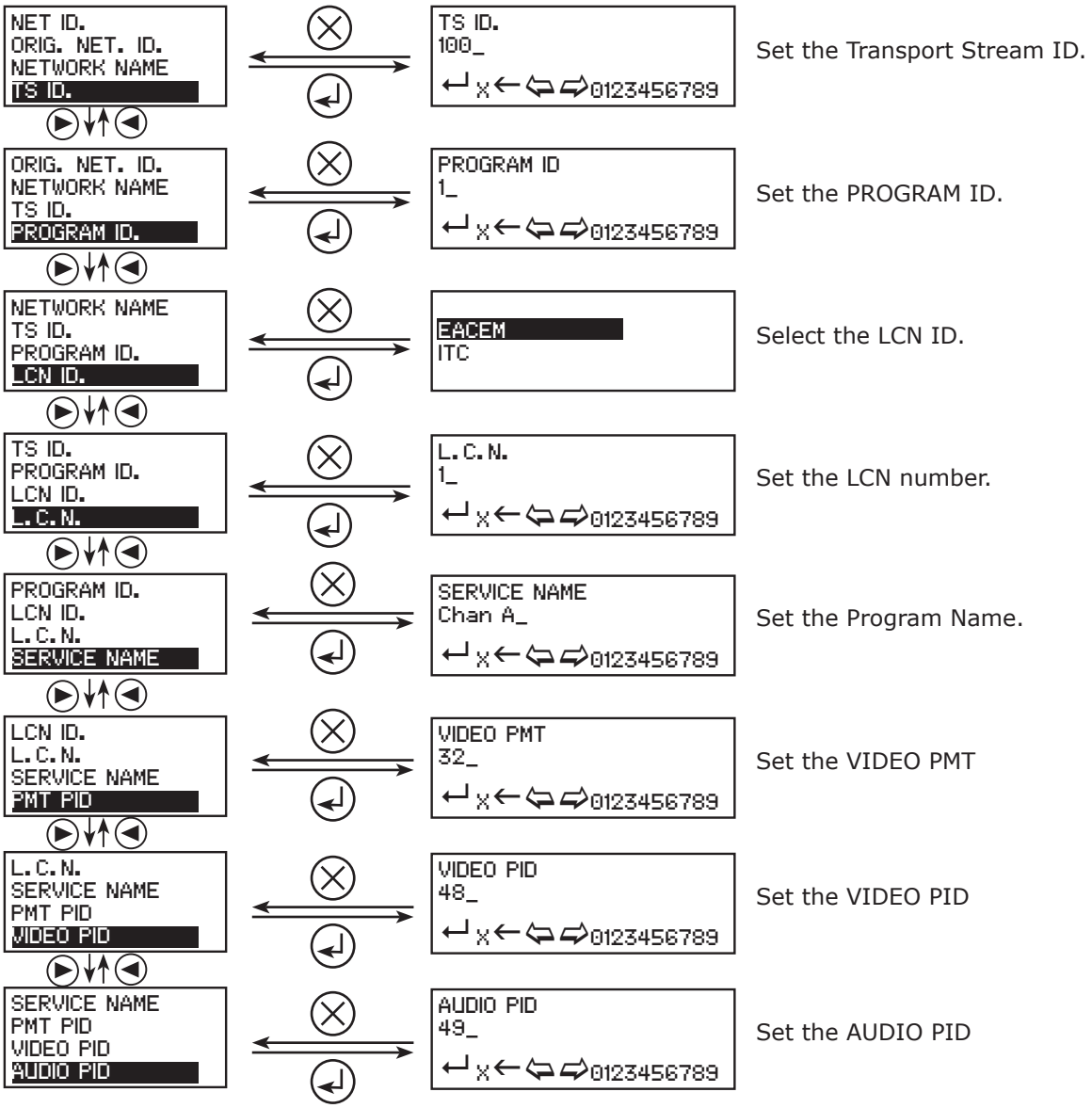
Set the Network ID.



Set the Original Network ID.



Set the NETWORK NAME



4.4- The language menu

Select in this menu your preferential language.

4.5 - Default configuration

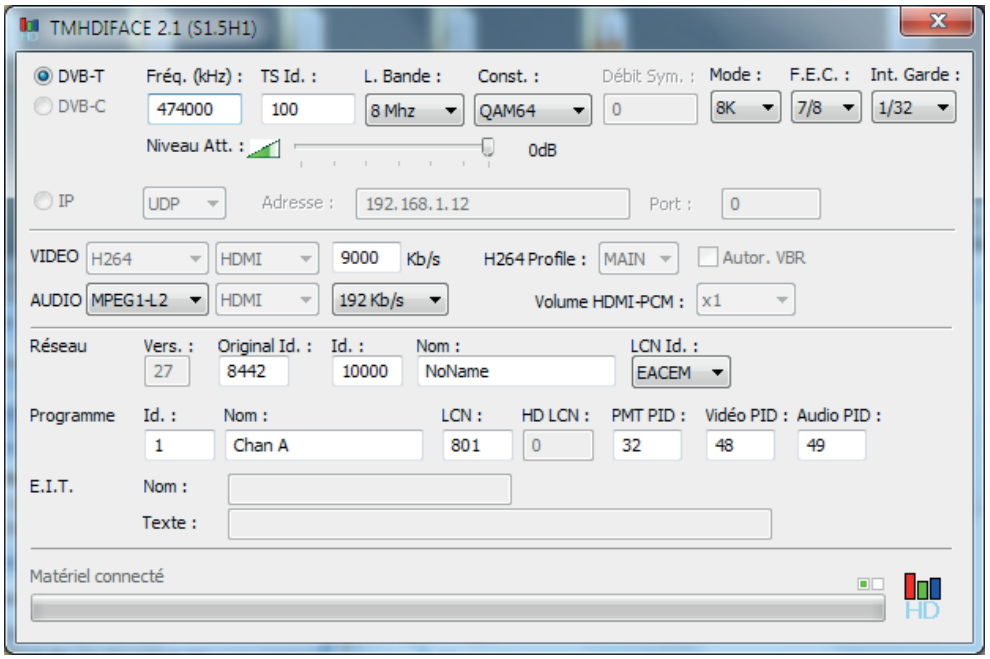
When selecting this option, all your modifications will be lost, and the default factory settings will be restored.

5 - Programming using a PC

The settings of the HD400MOD can also be changed using a PC.

First, please install the software **TMHDIFace** on your PC. You can download this software from our website
After installation of this software, connect the HD400MOD using a USB cable (not included) to your personal computer. Then launch the program **TMHDIface.**

On the display of the HD400MOD the message <USB> appears, indicating that the programming is now performed through your PC. The following window appears on your screen.



Now, all parameters discussed in Chapter 4 of this user manual can be modified by TMHDIface.

6 - Technical specifications

Video input	**Input**	HDMI
	Resolution modes	480p -576p -720p - 1080i - 1080P
	Compression	H.264 – bitrate 5-15 Mb/s
Audio input	**Input**	HDMI
	Sample Rate	HDMI (32kHz / 44.1 kHz / 48 kHz)
	Compression	AAC-LC / MPEG1-L2– bitrate 128-384 Kb/s
DVB Processing	**Table insertion**	PAT, PMT, SDT, NIT
	Configuration	Channel/network name, SID, LCN, TSID, ONID, NID, versions, audio, video PIDs…
DVB-T output	Output frequency / level	170-230 MHz + 470-862 MHz / > 85 dBµV
	Constellation - FEC	QPSK/16QAM/64QAM - 1/2, 2/3, 3/4, 5/6, 7/8
	Guard interval	1/4, 1/8, 1/16, 1/32
	Mode - MER	2K/8K - 31 dB
Power	DC 2.1 mm connector	+5V
	Consumption	10 Watts
Dimensions	LxWxH	150x130x35mm
	Weight	0.6 kg